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The Hydrologic Cycle



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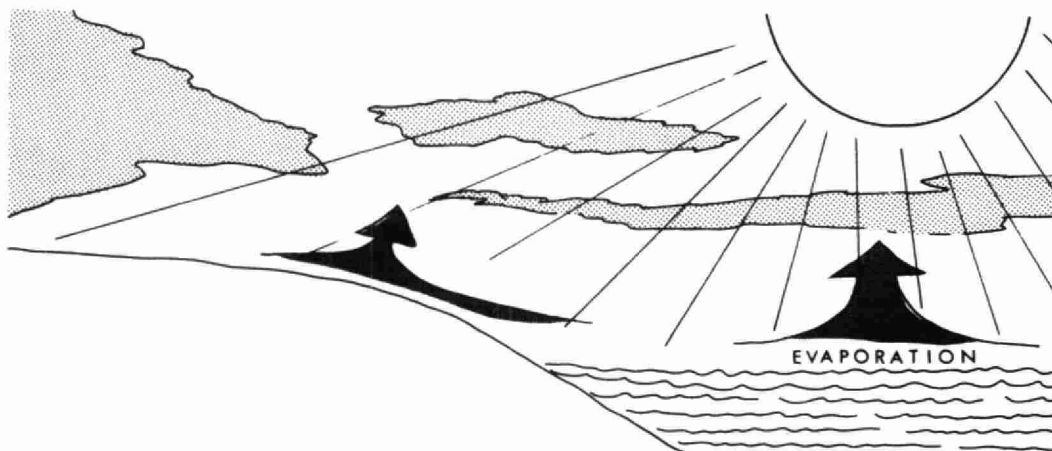
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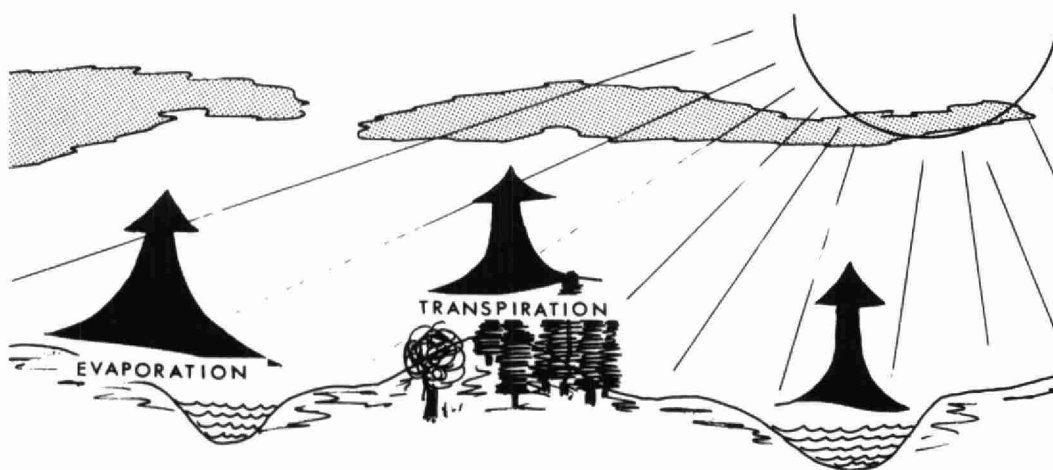
THE HYDROLOGIC CYCLE

From the vast expanse of the ocean, the sun's energy evaporates water which rises as water vapour and condenses to form clouds of fresh water. The clouds move with the air currents in the atmosphere. As they



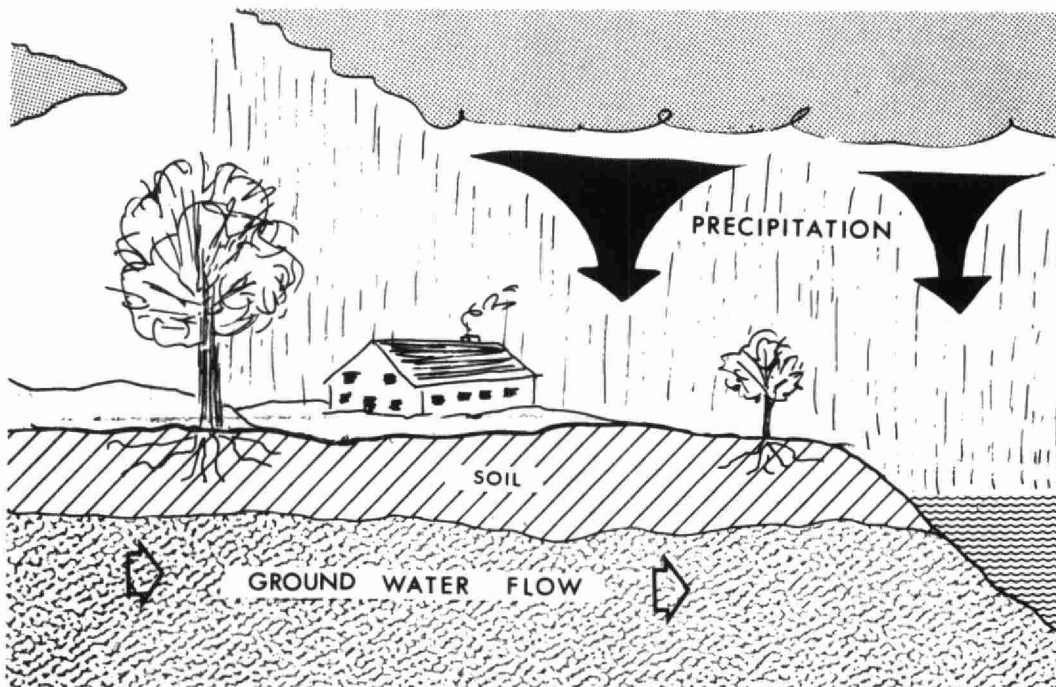
become larger and heavier, droplets of water are formed which in time fall as rain, snow or hail, depending upon the time of year and the location. This falling moisture is called precipitation.

Over land areas the same thing occurs. Water is evaporated from lakes, rivers, streams and land surfaces into the atmosphere and forms more clouds. Most plants transpire or give off water to the atmosphere during the process of growth. This giving off of moisture to the atmosphere by plants is called transpiration.



In short then, evaporation of moisture from oceans, lakes, rivers, streams and lands, and transpiration of moisture from plants form the clouds, which eventually return this moisture to earth as precipitation.

The precipitation which returns to earth soaks into the ground or runs off into surface waterways. The water which soaks into the ground is used by plants for growth or joins the flow of water below the surface of the ground to eventually return to rivers, lakes and oceans. The water which soaks into the ground to the water table is called ground water, while the water visible above the ground is called surface water.



All together, evaporation and transpiration forming clouds, precipitation returning the water to earth, and the flow of water on the surface and underground, forms a cycle of water movement. This is called the water cycle or the hydrologic cycle. Hydrology is the science of the behaviour of water in the atmosphere, on the surface of the earth, and underground.

The hydrologic cycle maintains our waterways and replenishes our ground-water supplies. When precipitation is below average shortages may occur where no provision has been made for storing water. When precipitation is excessive, floods usually result. Conservation measures, such as the construction of dams and ponds, are utilized to compensate for weather changes from season to season and year to year.

